

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:  
Suzuki, et al

Confirmation No. 9403

Serial No. 09/241,989

Group Art Unit: 2871

Filed: February 2, 1999

Examiner: Duong, Thoi V.

For: **Optical Film and Liquid Crystal Display  
Device Using the Film**

TKHR Ref. 250129-1030

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

Mail Stop Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This Appeal Brief under 37 C.F.R. § 41.37 is submitted in support of the Notice of Appeal filed May 22, 2009.

Applicant has separately filed a petition to have the reissue declaration accepted, which is also the subject of this appeal. That petition was filed three month ago, and has not yet been acted upon. This appeal brief is being filed out of an abundance of caution, for fear that the petition is denied on the basis that the issue is one that should have, instead, been appealed. Clearly, the issue presented herein, which has also been presented in the petition, must either be the proper subject of the petition or this appeal. Thus, under one vehicle or the other, this issue must be decided by the Patent Office.

### **I. Real Party in Interest**

The real party in interest is AU Optronics Corp. having a place of business at No. 1, Li-Hsin Rd. 2, Science-Based Industrial Park, Hsinchu, Taiwan 300.

### **II. Related Appeals and Interferences**

There are no known related appeals or interferences.

### **III. Status of Claims**

All pending claims were substantively allowed by the FINAL Office Action. However, the FINAL Office Action has maintained a rejection of the Reissue Declaration. If this rejection is upheld, the reissue proceeding will be terminate, which will serve to nullify all amendments made during the course of the reissue proceedings.

### **IV. Status of Amendments**

No amendments have been made after the FINAL Office Action, and all amendments submitted prior to that time have been entered. The claims in the attached claims Appendix reflect the present state of Appellants' claims.

## **V. Summary of Claimed Subject Matter**

The claimed inventions are summarized below with reference numerals and references to the written description ("specification") and drawings. The subject matter described in the following appears in the original disclosure at least where indicated, and may further appear in other places within the original disclosure. Note: since no substantive rejections have been made, such that no claims are being argued in this appeal brief, it is not believed that any summary of claimed subject matter is required.

Embodiments of the present invention, such as that define by claim 1, define a liquid crystal display device (Fig. 1) including a liquid crystal display (reference number 1, col. 3, lines 66-67) panel and a back light device (reference number 6, col. 3, lines 66-67), said back light device comprising: a light source for emitting light (reference number 7, col. 4, line 7); a light guide means (reference number 8, col. 4, line 8) having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source; a reflector means (Fig. 2, col. 4, line 11) provided on a back surface of said light guide means; and an optical film (reference number 9, col. 4, line 8) of transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide means, including a first surface having a wave structure including a plurality of regularly spaced isosceles triangles prisms arranged side-by-side (col. 4, lines 46-50), the prisms having smooth surfaces, and a second surfacing having an optically rough structure for performing diffuse transmissions (col. 4, lines 56-59), wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat (col. 5, lines 33-35), angles prisms surfaces to gather light from the diffuse transmission into a desired viewing

angle for the liquid crystal display panel, wherein a polarizer is positioned between said liquid crystal display panel and said optical film (col. 3, lines 9-10), and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160  $\mu\text{m}$  apart (col. 8, lines 4-10).

## **VI. Grounds of Rejection to be Reviewed on Appeal**

No rejections are to be reviewed in this appeal. Instead, this appeal is filed to see review of the Examiner's refusal to accept the reissue declaration.

## **VII. Arguments**

### **The Rejection of the Reissue Declaration Should be Overturned**

This is a reissue application, which has now been in prosecution before the U.S. PTO for over 10 years. At this stage of the reissue proceedings, all pending claims have been substantively allowed. However, the Examiner states that this reissue application cannot be allowed, because both an original reissue declaration stands rejected (although it was initially accepted), and a substitute/supplemental declaration has been rejected. In rejecting the declarations, the Examiner states that the error(s) alleged in the declaration(s) are not errors upon which reissue can be granted. This position is clearly false. According to the reissue statute of 35 U.S.C. 251: "Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of ... the patentee claiming more or less than he had a right to claim in the patent, the Director shall ... reissue the patent for the invention ..."

As pending claims in this reissue application are of different scope than the original issued claims (without any deceptive intent), the original patent is rendered either partially or wholly inoperative, making reissue entirely proper.

Consequently, the Examiner's position is clearly erroneous, and the declaration(s) submitted in this reissue application should be accepted.

As set forth above, this reissue application was filed over 10 years ago. The original declaration was accepted (or at least was not objected to).

All pending claims (as amended through the reissue prosecution) have now been allowed, and the only outstanding issue is that pertaining to the declaration.

Despite having accepted the original declaration in this application, in recent months, during the tail end of this prosecution, the Examiner raised an objection to the declaration. In response, the undersigned commissioned an investigator to locate the original inventors (because they were formerly employed by IBM in Japan, but are no longer employed there). The inventors were located and executed a substitute/supplemental declaration. After submitting that declaration (and receiving a further, FINAL rejection), the undersigned discussed this matter by telephone with Examiner Duong. During that telephone discussion, the undersigned came to understand that the original declaration was now being rejected, as a result of a supervisory review of this reissue application.

The rejection of the declaration is made on the basis that the declaration is defective because the error which is relied upon to support the reissue application is not an error upon which a reissue can be based. In this regard, the Office Action stated that

the feature being relied upon (as constituting the “error”) was claimed in the original patent as claims 2, 5, and 7. This position is erroneous.

In this regard, the reissue statute clearly states that: “Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent ...” (35 U.S.C. § 251). If an independent claim would be invalid without a feature of a dependent claim, then the patent would be “partly inoperative or invalid, by reason ... of the patentee claiming more or less than he had a right to claim.” Thus, the error alleged in both the original declaration and in the supplemental/substitute declaration are clearly proper, in view of the reissue statute. Frankly, the undersigned doesn’t even understand the basis upon which these declarations have been refused.

By way of illustration, an annotated version of claim 1 is set forth below:

1. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:  
a light source for emitting light;  
a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;  
a reflector means provided on a back surface of said light guide means;  
and  
an optical film of transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide means, including a first surface having a wave structure including a plurality of regularly spaced isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces, and a second ~~surface~~ surfacing having an optically rough structure for performing diffuse transmissions, wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat, angles ~~prism~~ prisms surfaces to gather light from the diffuse transmission into a desired viewing angle for the liquid crystal display panel, wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is

aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160  $\mu$ m apart.

Underlining in the above annotates features that were added to claim 1 during the prosecution of the reissue application. That is, claim 1 (above) is annotated with respect to the original issued patent. It is, therefore, clear that claim 1 (in its presently pending form) is narrower than the original issued claim 1.

The Examiner's stated position that the error is not one upon which reissue can be granted is inconsistent with the positions taken by the examiner during prosecution (which led to a narrowing of the claim). Stated another way, if the declaration is not accepted and this reissue application is terminated, then the original issued patent remains in force. Maintaining the rejection of the declaration (by the PTO) is therefore a tacit allegation that the original issued patent is neither wholly nor partially invalid or inoperative, and claim 1 (as issued) patentably defines over the prior art.

In addition, the FINAL Office Action stated "Further, the reissue oath/declaration filed with this application is defective because it fails to contain a statement that all errors which are being corrected ... arose without any deceptive intention on the part of the applicant." (Final Office Action, p. 2, bottom paragraph). This statement is clearly incorrect. First, the supplemental declaration submitted on April 28, 2003 contained this statement. In this regard, the second to last page of that declaration states "All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant." The declaration that was more recently filed by the undersigned, on August 26, 2008, clearly includes this statement (as the declaration was provided in the

form of FORM PTO/SB/51, and this language is included as part of the form itself – see top of page 2 of that declaration).

With the foregoing explanations, the undersigned respectfully submits that the rejections of both the original declaration and the declaration submitted in August 2008 are both misplaced. It should be appreciated that, only one of these declarations needs to be accepted to place the application in condition for allowance.

As set forth above, the basis of the declaration clearly comports with the relevant reissue statute, as it cites an error which renders the original patent partially invalid or inoperative. Therefore, the rejections that the declarations fail to recite an error upon which reissue can be based are clearly misplaced and should be overturned.

### **CONCLUSION**

In summary, it is Appellants' position that Appellants' claims are patentable over the applied cited art references and that the rejection of these claims should be overturned. Appellants therefore respectfully request that the Board of Appeals overturn the Examiner's rejection and allow Appellants' pending claims. In addition to the claims shown in the claims Appendix VIII, Appendix IX attached hereto indicates that there is no evidence being attached and relied upon by this brief. Appendix X attached hereto indicates that there are no related proceedings.



A credit card authorization is provided herewith to cover the fee associated with the accompanying appeal brief. No additional fee is believed to be due in connection with this submission. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

/Daniel R. McClure/

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Daniel R. McClure  
Reg. No. 38,962

**THOMAS, KAYDEN, HORSTEMEYER  
& RISLEY, L.L.P.**  
600 Galleria Parkway S.E.  
Suite 1500  
Atlanta, Georgia 30339  
(770) 933-9500

**VIII. Claims Appendix under 37 C.F.R. § 41.37(c)(1)(viii)**

The following are the claims that are involved in this Appeal.

1. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:
  - a light source for emitting light;
  - a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;
  - a reflector means provided on a back surface of said light guide means; and
  - an optical film of transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide means, including a first surface having a wave structure including a plurality of regularly spaced isosceles triangles prisms arranged side-by-side, the prisms having smooth surfaces, and a second surfacing having an optically rough structure for performing diffuse transmissions, wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat, angles prisms surfaces to gather light from the diffuse transmission into a desired viewing angle for the liquid crystal display panel,
- wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160  $\mu\text{m}$  apart.

2. (Canceled)

3. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

two optical films of transparent material positioned between said back surface of said liquid crystal display and said top surface of said light guide means, each of said optical films including a first surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prism having smooth surfaces, and a second surface having an optically rough structure for performing diffuse transmission wherein a top angle of said isosceles triangle prisms is in a range of 95 degrees to 120 degrees for flat, angled prism surfaces to gather light from the diffuse transmission by the second surface into a desired viewing angle for the liquid crystal display panel.

4. A liquid crystal display device according to claim 3, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films is oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

5. A liquid crystal display device according to claim 3, wherein a polarizer is positioned between said liquid crystal display panel and said two optical films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are no more than 160  $\mu\text{m}$  apart.

6. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide means having a top surface facing a back surface of said liquid crystal display panel and a side surface receiving said light from said light source;

a reflector means provided on a back surface of said light guide means; and

an optical film of transparent material positioned between said liquid crystal display panel and said light guide means, including a first surface having a structure including a plurality of quadrangular prisms, which are substantially the same size and shape, in an orderly matrix of equally spaced prisms, the prisms having smooth surfaces, and a second surface having an optically rough structure for performing diffuse transmission wherein a top angle of said quadrangular prisms is in a range of 95 degrees to 120 degrees for flat, angles sides of the prisms to gather the light from the

diffuse transmission of the second surface into the desired viewing angle for the liquid crystal display device,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said quadrangular prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

7. A liquid crystal display device according to claim 6, wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which peaks and valleys of said quadrangular prisms of said optical film are oriented in a parallel to a polarizing axis of said polarizer and the tops of the quadrangle prisms are no more than 160  $\mu\text{m}$  apart.

8-12. (Canceled)

13. A liquid crystal display device including a liquid crystal display panel and a back light device, said back light device comprising:

a light source for emitting light;

a light guide having a top surface facing a back surface of said display panel and a side surface receiving said light from said light source;

a reflector provided on a back surface of said light guide; and

an optical film of light transparent material positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, said optical film including a first surface having an optically rough structure for diffuse-transmitting said light from said light guide and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface to gather light passing through said second surface in a direction toward said display panel, wherein a top angle of said isosceles triangle prisms of said optical film is in a range of about 90 degrees to about 120 degrees for flat, angle prism surfaces to gather light from the diffuse transmission and directionally distribute said light within a range defined by a given angle,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which said peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160  $\mu\text{m}$  apart.

14. (Canceled)

15. The liquid crystal display device according to claim 13, wherein luminance of said gathered light is increased within and decreased outside of a desired viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of said display panel.

16. The liquid crystal display device according to claim 13, further including a second optical film positioned between said back surface of said liquid crystal display panel and said top surface of said light guide, wherein a direction along which peaks and valleys of said isosceles triangle prisms of one of said two optical films are oriented is at an angle with respect to a direction along which peaks and valleys of said isosceles triangles prisms of another of said two optical films are oriented.

17. The liquid crystal display device according to claim 16, wherein said angle is perpendicular.

18. The liquid crystal display device according to claim 16, wherein a polarizer is positioned between said liquid crystal display panel and said two optical films, and a direction along which peaks and valleys of said isosceles triangle prisms of said optical film closer to said polarizer is oriented in parallel to a polarizing axis of said polarizer.

19. The liquid crystal display device according to claim 13, wherein the tops of the isosceles triangle prisms are no more than 160  $\mu\text{m}$  apart.

20-41. (Canceled)

42. An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface for increasing illumination within a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction wherein a top angle of said isosceles triangle prisms is a range of about 90 degrees to about 120 degrees,

wherein a polarizer is positioned between a liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160  $\mu\text{m}$  apart.

43. An optical film of light transparent material including a first surface having an optically rough structure for diffuse-transmitting incident light and a second surface having a wave structure including a plurality of isosceles triangle prisms arranged side-by-side, the prisms having smooth surfaces for refracting said light diffuse-transmitted from said first surface and directionally distributing said diffuse-transmitted light through said second surface wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160  $\mu\text{m}$  apart, and wherein a polarizer is positioned between a liquid crystal



display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

44. The optical film according to claim 42, wherein a polarizer is positioned between a liquid crystal display panel and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

45. The optical film according to claim 42, wherein the tops of the isosceles triangle prisms are no more than 160  $\mu\text{m}$  apart.

46. An optical film for use in a liquid crystal display having a front portion and a back portion, said optical film comprising:

diffusing means including an optically rough structure on a first surface of said film for diffuse-transmitting light illuminated proximal to said back portion of said display; and

refracting means on a second surface of said film including a plurality of isosceles triangle prisms arranged side-by-side for directionally distributing said diffuse-transmitted light toward said front portion of said display and for increasing luminance of light within a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the

horizontal direction of said front portion of said display, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees,

wherein a polarizer is positioned between said liquid crystal display panel and said optical film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer and the tops of the isosceles triangle prisms are not farther than 160  $\mu\text{m}$  apart.

47. The optical film according to claim 46. wherein the tops of the isosceles triangle prisms are no more than 160  $\mu\text{m}$  apart.

48. The optical film according to claim 46. wherein a polarizer is positioned between said front portion of said liquid crystal display and said optical film, wherein a direction along which peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

49. A film for use in an optical system comprising a light source and a polarizer having a polarization axis, the film comprising a transparent material including a first surface and a second surface, said first surface having a structure including a plurality of isosceles triangular prisms arranged side-by-side for increasing luminance of light passing through said film in a direction corresponding to said polarization axis of said polarizer, and

said second surface having an optically rough structure for diffuse transmitting light emitted by said light source, wherein a top angle of said isosceles triangle prisms is in a range of about 90 degrees to about 120 degrees, wherein the tops of the isosceles triangle prisms are no more than 160  $\mu\text{m}$  apart, and wherein said polarizer is positioned between a liquid crystal display panel and said film, and a direction along which at least a portion of peaks and valleys of said isosceles triangle prisms are oriented is aligned in parallel to a polarizing axis of said polarizer.

50. The optical film according to claim 49. wherein said optical film is positioned within a liquid crystal display, said prisms having smooth surfaces for gathering diffuse transmitted light for increasing illumination within and decreasing illumination outside of a viewing angle of about 35 degrees in the vertical direction and about 55 degrees in the horizontal direction of the liquid crystal display.

51-66. (Canceled)

**IX. Evidence Appendix under 37 C.F.R. § 41.37(c)(1)(ix)**

None.

**X. Related Proceedings Appendix under 37 C.F.R. § 41.37(c)(1)(x)**

None.